

[Web](#) [Images](#) [Video](#) [News](#) [Maps](#) [Gmail](#) [more ▾](#)

[Sign in](#)

Google

smart card fingerprint RAM minutia

Search

[Advanced Search](#)
[Preferences](#)

Web

Results 1 - 10 of about 32,000 for **smart card fingerprint RAM minutia**. (0.21 seconds)

Biometric Door Locks

www.fslocks.com [Sponsored Link](#)
Sale on **Fingerprint Door Locks**. Prices Starting From \$199.00 Save!

[PDF] Microprocessor smart cards with fingerprint user authentication ...

File Format: PDF/Adobe Acrobat

integrate **fingerprint** verification inside a **smart card**, ... These discontinuities are called **minutiae** and their type, ... to **RAM**. requirements and time ...

ieeexplore.ieee.org/iel5/62/26834/01193715.pdf - [Similar pages](#)

[PDF] Fingerprint verification system on smart card - Consumer ...

File Format: PDF/Adobe Acrobat

points (**minutia**) and the core of the **fingerprint** are extracted. from the image. ... employs the **smart card** with **fingerprint** matching function ...

ieeexplore.ieee.org/iel5/7922/21838/01013982.pdf - [Similar pages](#)

[[More results from ieeexplore.ieee.org](#)]

[PPT] Exploitation of smart cards and human biometrics attributes

File Format: Microsoft Powerpoint - [View as HTML](#)

live **fingerprint** image against **fingerprint minutiae** stored on a card ... **Smart Card** Microprocessor. Problem & Solution. NPU. **RAM** ...

www.unob.cz/spi/ostatni/1day/06smolik.ppt - [Similar pages](#)

[EETimes.com](#) - **Fingerprint-sensors point to smart cards for market ...**

Fingerprint-sensors point to smart cards for market resurgence ... A software algorithm pinpoints 20 to 30 **minutiae** points, which is where a ridge stops or ...

www.eetimes.com/story/OEG20010806S0085 - 45k - [Cached](#) - [Similar pages](#)

[Method and system for fingerprint template matching - US Patent ...](#)

382/125 , Extracting **minutia** such as ridge endings and bifurcations 902/6 Image ...

A **fingerprint** verification system, comprising: a **smart card** reader, ...

www.patentstorm.us/patents/6681034-claims.html - 23k - [Cached](#) - [Similar pages](#)

[I2R, Media Division, Human Centric Media Department, Multi-Modal ...](#)

Our **Fingerprint Matching on Smart Card (Bio-Java Card)** technology is a biometric enabled ... It reduces **minutia** extraction errors such as spurious **minutiae**, ...

mmb.i2r.a-star.edu.sg/projects.htm - 33k - [Cached](#) - [Similar pages](#)

[PDF] Fingerprint Verification System Involving Smart Card

File Format: PDF/Adobe Acrobat

employ 50MHz CPU, 64Kbytes ROM, 32Kbytes EEPROM, and 8Kbytes **RAM** at **Smart Card**. **STORE**. **Card Reader**. **Input**. **Fingerprint**. **Enrolled**. **Minutiae** ...

www.springerlink.com/index/ejpyatp025hy58rn.pdf - [Similar pages](#)

[PDF] Smart Card and Biometrics Used for Secured Personal Identification ...

File Format: PDF/Adobe Acrobat - [View as HTML](#)

Upon extraction of the **fingerprint**. features, the **minutia** string stored on. the **smart card** is read. Then, the two. strings are compared, and if a percent ...

www.bmf.hu/conferences/raad2006/Madalin.pdf - [Similar pages](#)

[PDF] A Fingerprint Matching Using Minutia Ridge Shape for Low Cost ...

File Format: PDF/Adobe Acrobat

sult shows that the proposed method can be embedded in **smart cards** for a. real-time Match-on-Card system. key words:. biometrics, **fingerprint**, **minutiae** ...

ietfec.oxfordjournals.org/cgi/reprint/E88-A/5/1305.pdf - [Similar pages](#)

Sponsored Links

Smart Cards - Quotes

Free Quotes: Gift **Cards** & Systems

Compare Gift **Card** options!

www.BuyerZone.com/Smartcards

Biometric Smart Card

Full Biometric System on **Card**

Flexible **Fingerprint** Sensor

www.fidelica.com

Computer RAM Cards

100% Compatible **RAM** Memory With A Lifetime Warranty And Free Shipping

www.4allmemory.com

[PDF] [RFID with Bio-Smart Card in Linux](#)

File Format: PDF/Adobe Acrobat - [View as HTML](#)

fingerprint matching function in the **smart card** execute a. **fingerprint** matching between the ... feature points (**minutia**) and the core of the **fingerprint** are ...
www.cs.utexas.edu/~cdj/wia_files/submissions/007Final.pdf - [Similar pages](#)

[1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) **[Next](#)**

Try [Google Desktop](#): search your computer as easily as you search the web.

[Search within results](#) | [Language Tools](#) | [Search Tips](#) | [Dissatisfied? Help us improve](#)

©2007 Google - [Google Home](#) - [Advertising Programs](#) - [Business Solutions](#) - [About Google](#)

[Web](#) [Images](#) [Video](#) [News](#) [Maps](#) [Gmail](#) [more ▾](#)

[Sign in](#)

Google

smart card fingerprint RAM minutia

Search

[Advanced Search](#)
[Preferences](#)

Web

Results 11 - 20 of about 32,000 for **smart card fingerprint RAM minutia**. (0.17 seconds)

[PDF] Fingerprint Verification Technology

File Format: PDF/Adobe Acrobat - [View as HTML](#)

suitable for **fingerprint** matching on **smart card**. It is so efficient ... 7 seconds only depending on the number of available **minutia**. This ...

www.i2r.a-star.edu.sg/index.php?module=phatfile&

FILE_MAN_OP=Download&PHPWS_MAN_ITEMS%5B%5D=17 - [Similar pages](#)

[PPT] Match On Card Technology and its use for PKI

File Format: Microsoft Powerpoint - [View as HTML](#)

Minutiae data are unique and are the **fingerprint** processing standard ... Software program running on **smartcard**; Designed for 8-bit low-cost **smart cards** ...

www.unob.cz/spi/ostatni/1day/07vales.ppt - [Similar pages](#)

[PDF] LNCS 3212 - A Hardware Implementation of Fingerprint Verification ...

File Format: PDF/Adobe Acrobat

memory, 72KBytes of EEPROM data memory, and 8KBytes of **RAM** at most.

Since ... (**Smart Card**). STORE. CardReader. Input. **Fingerprint**. Enrolled.

Minutiae ...

www.springerlink.com/index/2fdfrhq820kfbqj.pdf - [Similar pages](#)

[PDF] An Identification System Combined with Fingerprint and Cryptography

File Format: PDF/Adobe Acrobat

If Alice's **smart card** is lost or she does not need the. certificate, she should revoke it. CA will verify her. identity and destroy the **fingerprint minutiae** ...

doi.ieeecomputersociety.org/10.1109/IMSCCS.2006.182 - [Similar pages](#)

M

Communication with a **smart card** is always initiated by the terminal. ... or macroscopic, images created by a **fingerprint**. **Minutiae**-based identification is ...
www.gi-de.com/portal/page?_pageid=44,110931&_dad=portal&_schema=PORTAL - 49k - [Cached](#) - [Similar pages](#)

IKSMARTMATCH Fingerprint Match-On-Card

Fingerprint Match-On-Card for Smart Cards & Security-IC's supporting ISO **minutia** data format. With the IKSMARTMATCH, IKENDI now provides its **fingerprint** ...

www.ikendi.com/products/refdesigns/iksmartmatch.htm - 6k -

[Cached](#) - [Similar pages](#)

Method and system for fingerprint template matching - US Patent ...

382/125 , Extracting **minutia** such as ridge endings and bifurcations ... **smart card**)

902/3 , Evaluates biometrics 902/6 Image processor (e.g., video camera) ...

www.patentstorm.us/patents/6681034.html - 20k - [Cached](#) - [Similar pages](#)

Biometric Authentication: First International Conference, ICBA ... - Google Books Result

by David. Zhang, Anil K. Jain - 2004 - Law - 800 pages

... 2 **Fingerprint Match-On-Card: Biometric Smart Cards** Biometric **smart-cards** ...

1 if the *i*-th **minutia** in *t* belongs to 1(D) and *u*₂ = 0 if the *i*-th **minutia** ...

books.google.com/books?isbn=3540221468... - Jul 9, 2007

ScienceDirect - Computer Networks : From smart cards to smart ...

One example of that limitation is the on-card **fingerprint** matching algorithm we have implemented with Veridicom. To allow fast matching, the list of **minutia** ...

linkinghub.elsevier.com/retrieve/pii/S138912860100161X - [Similar pages](#)

[PDF] Externalized Fingerprint Matching

File Format: PDF/Adobe Acrobat - [View as HTML](#)

use at least 2000 bytes of **RAM**. Code would usually occupy 2000 to presso Pro

smart card using Ikendi Software AG's minutiae extraction. engine. ...
www.gemplus.com/smart/rd/publications/pdf/BCN04cba.pdf - [Similar pages](#)

[Previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [11](#) **[Next](#)**

[Search within results](#) | [Language Tools](#) | [Search Tips](#)

©2007 Google - [Google Home](#) - [Advertising Programs](#) - [Business Solutions](#) - [About Google](#)

[Web](#) [Images](#) [Video](#) [News](#) [Maps](#) [Gmail](#) [more ▾](#)

[Sign in](#)

Google

smart card fingerprint RAM minutia

Search

[Advanced Search](#)
[Preferences](#)

Web

Results 21 - 30 of about 32,000 for smart card fingerprint RAM minutia. (0.20 seconds)

Information Security Applications: 4th International Workshop, ... - Google Books Result
by Kijoon. Chae, Moti. Yung - 2004 - Computers - 506 pages
Then, we describe a **fingerprint** enrollment algorithm that can check false **minutiae** detected and ... USB token is technologically identical to **smart cards** ...
books.google.com/books?isbn=3540208275...

iGuard™ Biometric Security System - Fingerprint Biometric Facility ...
Yes, if you do not use a **Smart Card**, the iGuard model number is FPS110-1000.
This helps keep 5000 records locally. The FPS110-2000 can keep 2000
fingerprint ...
www.gmasterinc.com/access-control/iguard/faq.htm - 52k - [Cached](#) - [Similar pages](#)

[DOC] *qi*β>*.*.*.*. ≥*≤*[]*+*≈*.*.* ∞Ñ7 *o***oU*bibjU*U* **O¿7 ...
File Format: Microsoft Word - [View as HTML](#)
ii) **Fingerprint** Sensor. iii) **Smart card** input. iv) **Flash Ram** ... For matching
purposes, a **minutia** is attributed with the type of **minutia**, location (x, ...
www.ee.cityu.edu.hk/~ISCE2000/021.doc - [Similar pages](#)

Non-minutiae automatic fingerprint identification system and ...
An automatic non-minutiae **fingerprint** identification system comprising in A
smart card reader means (not shown) replaces the PPI/MS reader 60 in the ...
www.freepatentsonline.com/6212290.html - 98k - [Cached](#) - [Similar pages](#)

METHOD AND SYSTEM FOR FINGERPRINT TEMPLATE MATCHING - Patent EP1203344
Fingerprint "minutiae" are conventionally defined as ridge endings or ridge
Smart card reader 110 has a **RAM** 112 for storing a measured **fingerprint** ...
www.freepatentsonline.com/EP1203344.html - 95k - [Cached](#) - [Similar pages](#)
[[More results from www.freepatentsonline.com](#)]

BiometriKa - Security and Biometric Identification Systems
With Fx3000, the developer can either match **fingerprint** images on a PC (by ...
Existing applications, where **smart cards** are used for digital signature, ...
www.biometrika.it/eng/fx3000.html - 22k - [Cached](#) - [Similar pages](#)

eVALUATING Biometrics
Instead of storing **fingerprints** in a centralized database, users carry a contactless
smart card, which holds a template derived from a fingerscan of one of ...
securitysolutions.com/mag/security_evaluating_biometrics/ - 47k -
[Cached](#) - [Similar pages](#)

CIPO - Canadian Patent Database - Claims - 2378345
The method of Claim 4, further comprising quantizing said **minutia** angle. A
fingerprint verification system, comprising, a **smart card** reader, said **smart** ...
patents1.ic.gc.ca/claims?patent_number=2378345&language=- - 27k -
[Cached](#) - [Similar pages](#)

[PDF] Biometric Technology Update: Match-on-Card
File Format: PDF/Adobe Acrobat - [View as HTML](#)
Fingerprint. Alignment. **Minutiae**. Matching. A **minutiae** is described by its
coordinates, x ... **Fingerprint** Matching on **Smart Card**. Scalable version: ...
[www.ida.gov.sg/doc/technology/technology_level3/Dr_Yau_Wei_Yun_-](http://www.ida.gov.sg/doc/technology/technology_level3/Dr_Yau_Wei_Yun_-_MOC_Technology_Update.pdf)
[_MOC_Technology_Update.pdf](#) - [Similar pages](#)

Biometrics World 2005
This work was focused on using today's very limited **smart cards** but nonetheless
the The technique uses **fingerprint minutiae** locations for locking and ...
www.wave-report.com/conference_reports/2005/avbpa2005.htm - 37k -
[Cached](#) - [Similar pages](#)

Previous [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [11](#) [12](#) **Next**

[Search within results](#) | [Language Tools](#) | [Search Tips](#)

©2007 Google - [Google Home](#) - [Advertising Programs](#) - [Business Solutions](#) - [About Google](#)

[Web](#) [Images](#) [Video](#) [News](#) [Maps](#) [Gmail](#) [more ▾](#)[Sign in](#)

Google

[Advanced Search](#)
[Preferences](#)

Web

Results 31 - 40 of about 32,000 for smart card fingerprint RAM minutia. (0.22 seconds)[\[PPT\] www.cse.msu.edu/~cse429/lectures/corcoran.ppt](#)File Format: Microsoft Powerpoint - [View as HTML](#)REQUIREMENT: Must be a **smart card** combined with biometrics and PKI authentication **Minutiae** - points of interest specifically in **fingerprints**. ...[Similar pages](#)[\[PDF\] PIV One](#)File Format: PDF/Adobe Acrobat - [View as HTML](#)**minutiae** template extracted from the. actual **fingerprint** image stored on the. employee's PIV contact **smart card**. Cross Match's Enterprise Match Server ...www.crossmatch.net/pdf/PIV_solutions_052606_final.pdf - [Similar pages](#)[\[PDF\] From smart cards to smart objects : The road to new smart ...](#)File Format: PDF/Adobe Acrobat - [View as HTML](#)and 4kB of **RAM** for processing, sometimes **FLASH** memory replace **ROM** and **EEPROM**. Even if this is enough for actual **Smart Cards** applications or near future's ...www.gemplus.co.jp/smart/rd/publications/pdf/PB00gdcc.pdf - [Similar pages](#)[Wave Report](#)Using low end **smart cards** the FAR was .1% with a FRR of 7.3%. ... The technique uses **fingerprint minutiae** locations for locking and unlocking a secure vault ...

www.wave-report.com/2005_Wave_Issues/wave0533.htm - 54k -

[Cached](#) - [Similar pages](#)[\[PDF\] An Asymmetric Fingerprint Matching Algorithm for Java Card™](#)File Format: PDF/Adobe Acrobat - [View as HTML](#)The **minutiae** can be used in **fingerprint** matching since they The chosen **smart- card** has 32Kbyte of **EEPROM**, about 1Kbyte of **RAM** memory distributed ...www.sci.unich.it/~bista/papers/papers-download/1568951610.pdf - [Similar pages](#)[Non-minutiae automatic fingerprint identification system and ...](#)A method for the automatic non-minutiae identification of a **fingerprint** of a A **smart card** reader means (not shown) replaces the PPI/MS reader 60 in ...www.wikipatents.com/5363453.html - 229k - [Cached](#) - [Similar pages](#)[CAT.INIST](#)Based on experimental results, we confirmed that the **RAM** requirement of the ...**Smart cards** ; Pin ; Number ; Modem ; **Fingerprint** ; Transmission protocol ...cat.inist.fr/?aModele=afficheN&cpsidt=15691525 - [Similar pages](#)[Biometrics gets better but still needs some work](#)The Precise 100 MC reader and **smart card** worked together to offload ... to compare a **fingerprint** scan against stored characteristics called **minutiae**, ...www.gcn.com/print/22_10/21949-1.html - 50k - [Cached](#) - [Similar pages](#)[\[PDF\] Externalized Fingerprint Matching](#)File Format: PDF/Adobe Acrobat - [View as HTML](#)small on-board **RAM** serves as a temporary storage of calculation results pressoPro **smart card** using Ikendi Software AG's **minutiae** extraction. engine. ...eprint.iacr.org/2004/021.pdf - [Similar pages](#)[FCW.com News - Fingerprint readers enhance notebook security](#)You could, for example, require a staff member to insert his or her **smart card** in addition to providing a registered **fingerprint** and a password. ...www.fcw.com/article72941-03-04-01-Print - 54k - [Cached](#) - [Similar pages](#)



USPTO

[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)
Search: ☒ The ACM Digital Library ☐ The Guide

smartcard fingerprint RAM minutia

SEARCH

THE ACM DIGITAL LIBRARY


[Feedback](#) [Report a problem](#) [Satisfaction survey](#)
Terms used: **smartcard fingerprint RAM minutia**

Found 296 of 205,978

Sort results by

relevance ☒

Display results

expanded form ☒

Save results to a Binder

Search Tips

☐ Open results in a new windowTry an [Advanced Search](#)Try this search in [The ACM Guide](#)

Results 1 - 20 of 200

Result page: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [next](#)

Best 200 shown

Relevance scale ☐ ☐ ☐ ☐ ☐**1** [Oral II: Secure smartcardbased fingerprint authentication](#)

T. Charles Clancy, Negar Kiyavash, Dennis J. Lin

November 2003

Proceedings of the 2003 ACM SIGMM workshop on Biometrics methods and applications WBMA '03

Publisher: ACM Press

Full text available: pdf(452.50 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In this paper, the fundamental insecurities hampering a scalable, wide-spread deployment of biometric authentication are examined, and a cryptosystem capable of using fingerprint data as its key is presented. For our application, we focus on situations where a private key stored on a smartcard is used for authentication in a networked environment, and we assume an attacker can launch o -line attacks against a stolen card. Juels and Sudan's *fuzzy vault* is used as a starting point for buildi ...

Keywords: authentication, biometrics, fingerprint, smartcard**2** [ID-based password authentication scheme using smart cards and fingerprints](#)

Hyun-Sung Kim, Sung-Woon Lee, Kee-Young Yoo

October 2003 **ACM SIGOPS Operating Systems Review**, Volume 37 Issue 4

Publisher: ACM Press

Full text available: pdf(466.31 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

This paper proposes two ID-based password authentication schemes, which does not require a dictionary of passwords or verification tables, with smart card and fingerprint. In these schemes, users can change their passwords freely. For a network without synchronization clocks, the proposed nonce-based authentication scheme can withstand message replay attacks. The proposed two schemes require a system to authenticate each user by each user's knowledge, possession, and biometrics, and this feature ...

Keywords: ID-based scheme, fingerprint, password authentication, smart card**3** [Computer security \(SEC\): Protected transmission of biometric user authentication data for oncard-matching](#)

Ulrich Waldmann, Dirk Scheuermann, Claudia Eckert

March 2004 **Proceedings of the 2004 ACM symposium on Applied computing SAC '04**

Publisher: ACM Press

Full text available: pdf(574.45 KB)

Additional Information: [full citation](#), [abstract](#), [references](#)

Since fingerprint data are no secrets but of public nature, the verification data transmitted to a smartcard for oncard-matching need protection by appropriate means in order to assure data origin in the biometric sensor and to prevent bypassing the sensor. For this purpose, the verification data to be transferred to the user smartcard is protected with a cryptographic checksum that is calculated within a separate security module controlled by a tamper resistant card terminal with integrated bio ...

Keywords: authentication, biometrics, cryptographic protocols, data integrity, electronic signature, oncard-matching, smartcards, system security, tamper proof environment

4 Biometric identification



Anil Jain, Lin Hong, Sharath Pankanti

February 2000 **Communications of the ACM**, Volume 43 Issue 2

Publisher: ACM Press

Full text available: pdf(677.32 KB) html(37.23 KB)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)



5 Application specific architectures: Microcoded coprocessor for embedded secure biometric authentication systems



Shenglin Yang, Patrick Schaumont, Ingrid Verbauwhede

September 2005 **Proceedings of the 3rd IEEE/ACM/IFIP international conference on Hardware/software codesign and system synthesis CODES+ISSS '05**, **Proceedings of the 3rd IEEE/ACM/IFIP international conference on Hardware/software codesign and system synthesis CODES+ISSS '05**

Publisher: ACM Press, IEEE Computer Society

Full text available: pdf(292.29 KB) [Publisher Site](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)



We design and implement a cryptographic biometric authentication system using a microcoded architecture. The secure properties of the biometric matching process are obtained by means of a fuzzy vault scheme. The algorithm is implemented in a reprogrammable, microcoded coprocessor called FV16. We present the micro-architecture of FV16 as well as a dedicated assembler for this architecture. Our coprocessor can be attached to an ARM processor, and offers a 83-fold cycle count improvement when the f ...

Keywords: cryptographic biometrics, fingerprint verification., fuzzy vault scheme, microcoded coprocessor

6 Towards design and validation of mixed-technology SOCs



S. Mir, B. Charlot, G. Nicolescu, P. Coste, F. Parrain, N. Zergainoh, B. Courtois, A. Jerraya, M. Rencz

March 2000 **Proceedings of the 10th Great Lakes symposium on VLSI GLSVLSI '00**

Publisher: ACM Press

Full text available: pdf(581.54 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)



This paper illustrates an approach to design and validation of heterogeneous systems. The emphasis is placed on devices which incorporate MEMS parts in either a single mixed-technology (CMOS + micromachining) SOC device, or alternatively as a hybrid system with the MEMS part in a separate chip. The design flow is general, and it is illustrated for the case of applications embedding CMOS sensors. In particular, applications based on finger-print recognition are considered since a ric ...

Keywords: HDLs, MEMS, SOCs, architecture exploration, cosimulation, design, verification

7 Smart Cards and Biometrics: The cool way to make secure transactions



David Corcoran, David Sims, Bob Hillhouse

March 1999 **Linux Journal**

Publisher: Specialized Systems Consultants, Inc.

Full text available: html(22.95 KB)

Additional Information: [full citation](#), [index terms](#)



8 Embedded hardware design case studies: Design flow for HW / SW acceleration transparency in the thumbpod secure embedded system




David Hwang, Bo-Cheng Lai, Patrick Schaumont, Kazuo Sakiyama, Yi Fan, Shenglin Yang, Alireza Hodjat, Ingrid Verbauwhede



June 2003 **Proceedings of the 40th conference on Design automation DAC '03**

Publisher: ACM Press

Full text available:  pdf(250.69 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This paper describes a case study and design flow of a secure embedded system called ThumbPod, which uses cryptographic and biometric signal processing acceleration. It presents the concept of HW/SW acceleration transparency, a systematic method to accelerate Java functions in both software and hardware. An example of acceleration transparency for a Rijndael encryption function is presented. The embedded prototype hardware platform is also described. Acceleration transparency yields software and ...

9 Security on FPGAs: State-of-the-art implementations and attacks



Thomas Wollinger, Jorge Guajardo, Christof Paar

August 2004 **ACM Transactions on Embedded Computing Systems (TECS)**, Volume 3 Issue 3

Publisher: ACM Press

Full text available:  pdf(296.79 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In the last decade, it has become apparent that embedded systems are integral parts of our every day lives. The wireless nature of many embedded applications as well as their omnipresence has made the need for security and privacy preserving mechanisms particularly important. Thus, as field programmable gate arrays (FPGAs) become integral parts of embedded systems, it is imperative to consider their security as a whole. This contribution provides a state-of-the-art description of security issues ...

Keywords: Cryptography, FPGA, attacks, cryptographic applications, reconfigurable hardware, reverse engineering, security



10 Smart card evolution



Katherine M. Sheller, J. Drew Procacono

July 2002 **Communications of the ACM**, Volume 45 Issue 7

Publisher: ACM Press

Full text available:  pdf(110.58 KB)  html(31.22 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Smart cards and their related technologies are an emerging component of electronic commerce worldwide. In some countries, they are revolutionizing aspects of commerce, healthcare, and recreation.


11 Security in embedded systems: Design challenges



Srivaths Ravi, Anand Raghunathan, Paul Kocher, Sunil Hattangady

August 2004 **ACM Transactions on Embedded Computing Systems (TECS)**, Volume 3 Issue 3

Publisher: ACM Press

Full text available:  pdf(3.67 MB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

Many modern electronic systems---including personal computers, PDAs, cell phones, network routers, smart cards, and networked sensors to name a few---need to access, store, manipulate, or communicate sensitive information, making security a serious concern in their design. Embedded systems, which account for a wide range of products from the electronics, semiconductor, telecommunications, and networking industries, face some of the most demanding security concerns---on the one hand, they are oft ...

Keywords: Embedded systems, architecture, authentication, battery life, cryptographic algorithms, decryption, encryption, hardware design, processing requirements, security, security attacks, security protocols, tamper resistance


12 HIDE: an infrastructure for efficiently protecting information leakage on the address bus



Xiaotong Zhuang, Tao Zhang, Santosh Pande

October 2004 **ACM SIGPLAN Notices**, **ACM SIGOPS Operating Systems Review**, **ACM SIGARCH Computer Architecture News**, **Proceedings of the 11th international conference on Architectural support for programming languages and operating systems ASPLOS-XI**, Volume 39, 38, 32 Issue 11, 5, 5

Publisher: ACM Press

Full text available:  pdf(216.31 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

XOM-based secure processor has recently been introduced as a mechanism to provide copy and tamper resistant execution. XOM provides support for encryption/decryption and integrity checking. However, neither XOM nor any other current approach adequately addresses the problem of information leakage via the address bus. This paper shows that without address bus protection, the XOM model is severely crippled. Two realistic attacks are shown and experiments show that 70% of the code might be cracked ...

Keywords: address bus leakage protection, secure processor

13 Special session on security on SoC: Securing wireless data: system architecture challenges



Srivaths Ravi, Anand Raghunathan, Nachiketh Potlapally

October 2002 **Proceedings of the 15th international symposium on System Synthesis ISSS '02**

Publisher: ACM Press

Full text available: pdf(172.35 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Security is critical to a wide range of current and future wireless data applications and services. This paper highlights the challenges posed by the need for security during system architecture design for wireless handsets, and provides an overview of emerging techniques to address them. We focus on the computational requirements for securing wireless data transactions, revealing a gap between these requirements and the trends in processing capabilities of embedded processors used in wireless h ...

Keywords: 3DES, AES, DES, IPsec, RSA, SSL, WTLS, decryption, design methodology, embedded system, encryption, handset, mobile computing, performance, platform, security, security processing, system architecture, wireless communications

14 Report of the national workshop on internet voting: issues and research agenda

C. D. Mote

May 2002 **Proceedings of the 2002 annual national conference on Digital government research dg.o '02**

Publisher: Digital Government Research Center

Full text available: pdf(539.99 KB)

Additional Information: [full citation](#)

15 Report of the national workshop on internet voting: issues and research agenda

C. D. Mote

May 2000 **Proceedings of the 2000 annual national conference on Digital government research dg.o '00**

Publisher: Digital Government Research Center

Full text available: pdf(539.99 KB)

Additional Information: [full citation](#), [abstract](#)

As use of the Internet in commerce, education and personal communication has become common, the question of Internet voting in local and national elections naturally arises. In addition to adding convenience and precision, some believe that Internet voting may reverse the historical and downward trend of voter turnout in the United States. For these reasons President Clinton issued a memorandum in December 1999 requesting that the National Science Foundation examine the feasibility of online (In ...

16 Muscle Flexes Smart Cards into Linux

David Corcoran

August 1998 **Linux Journal**

Publisher: Specialized Systems Consultants, Inc.

Full text available: html(16.89 KB)

Additional Information: [full citation](#), [abstract](#), [index terms](#)

The newest kind of card for your pocketbook offers better security for the information it holds


17 Protecting applications with transient authentication



Mark D. Corner, Brian D. Noble

May 2003 **Proceedings of the 1st international conference on Mobile systems, applications and services MobiSys '03**

Publisher: ACM Press

Full text available:  pdf(294.40 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [cited by](#)


How does a machine know who is using it? Current systems authenticate their users infrequently, and assume the user's identity does not change. Such *persistent authentication* is inappropriate for mobile and ubiquitous systems, where associations between people and devices are fluid and unpredictable. We solve this problem with *Transient Authentication*, in which a small hardware token continuously authenticates the user's presence over a short-range, wireless link. We present the fo ...

18 [Protecting file systems with transient authentication](#)

Mark D. Corner, Brian D. Noble

January 2005 **Wireless Networks**, Volume 11 Issue 1-2

Publisher: Kluwer Academic Publishers

Full text available:  pdf(422.63 KB)Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)


Laptops are vulnerable to theft, greatly increasing the likelihood of exposing sensitive files. Unfortunately, storing data in a cryptographic file system does not fully address this problem. Such systems ask the user to imbue them with long-term authority for decryption, but that authority can be used by anyone who physically possesses the machine. Forcing the user to frequently reestablish his identity is intrusive, encouraging him to disable encryption. This tension between usability and secur ...

19 [Surfing the net for software engineering notes: Surfing the net for software engineering notes](#)

Mark Doernhoefer

November 2006 **ACM SIGSOFT Software Engineering Notes**, Volume 31 Issue 6

Publisher: ACM Press

Full text available:  pdf(786.88 KB)Additional Information: [full citation](#), [abstract](#)

I talk about software security on a regular basis in this column. Past articles have featured web sites addressing security design tips and techniques, security reporting sites, and other security resources available on the Internet. I'd like to stop talking about security but the subject seems to keep coming up in the press. Recent news reports on lost laptops compromising personal data, security of voting machines, new zero day exploits, and new rootkits would indicate that we are still not wh ...

20 [A new public key cryptosystem based on higher residues](#)

David Naccache, Jacques Stern

November 1998 **Proceedings of the 5th ACM conference on Computer and communications security CCS '98**

Publisher: ACM Press


Full text available:  pdf(1.00 MB)Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

Results 1 - 20 of 200

Result page: [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [next](#)

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2007 ACM, Inc.

[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)Useful downloads:  [Adobe Acrobat](#)  [QuickTime](#)  [Windows Media Player](#)  [Real Player](#)



USPTO

[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)
 Search: ☐ The ACM Digital Library ☐ The Guide



 [Feedback](#) [Report a problem](#) [Satisfaction survey](#)

Terms used: **smartcard fingerprint RAM minutia**

Found 296 of 205,978

Sort results by:
 Display results:
☐ Open results in a new window

Try an [Advanced Search](#)
 Try this search in [The ACM Guide](#)

Results 21 - 40 of 200 Result page: [previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [next](#)

Best 200 shown


Relevance scale ☐ ☐ ☐ ☐ ☐**21** [A VLSI Design Flow for Secure Side-Channel Attack Resistant ICs](#)

Kris Tiri, Ingrid Verbauwhede

March 2005

Proceedings of the conference on Design, Automation and Test in Europe - Volume 3 DATE '05

Publisher: IEEE Computer Society

Full text available:  [pdf\(289.79 KB\)](#)Additional Information: [full citation](#), [abstract](#), [index terms](#)

This paper presents a digital VLSI design flow to create secure, side-channel attack (SCA) resistant integrated circuits. The design flow starts from a normal design in a hardware description language such as VHDL or Verilog and provides a direct path to a SCA resistant layout. Instead of a full custom layout or an iterative design process with extensive simulations, a few key modifications are incorporated in a regular synchronous CMOS standard cell design flow. We discuss the basis for side-ch ...


22 [Poster: A secure fingerprint matching technique](#)

Shenglin Yang, Ingrid M. Verbauwhede

November 2003

Proceedings of the 2003 ACM SIGMM workshop on Biometrics methods and applications WBMA '03

Publisher: ACM Press

Full text available:  [pdf\(452.10 KB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

In this paper, we propose a novel robust secure fingerprint matching technique, which is secure against side channel attacks. An algorithm based on the local structure of the minutiae is presented to match the fingerprints. The main contribution is the careful division of the fingerprint recognition system into two parts: a secure part and a non-secure part. Only the relative small secure part, which contains sensitive biometric template information, requires realization in specialized DPA-proof ...


Keywords: DPA-proof, embedded system, fingerprint recognition, secure matching**23** [PicoDBMS: Scaling down database techniques for the smartcard](#)

Philippe Pucheral, Luc Bouganim, Patrick Valduriez, Christophe Bobineau

September 2001

The VLDB Journal — The International Journal on Very Large Data Bases, Volume 10 Issue 2-3

Publisher: Springer-Verlag New York, Inc.

Full text available:  [pdf\(259.03 KB\)](#)Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

Smartcards are the most secure portable computing device today. They have been used successfully in applications involving money, and proprietary and personal data (such as banking, healthcare, insurance, etc.). As smartcards get more powerful (with 32-bit CPU and more than 1 MB of stable memory in the next versions) and become multi-application, the need for database management arises. However, smartcards have severe hardware limitations (very slow write, very little RAM, constrained stable mem ...

Keywords: Atomicity, Durability, Execution model, PicoDBMS, Query optimization, Smartcard applications, Storage model

24 Poster: Integrated Wavelet and Fourier-Mellin invariant feature in fingerprint verification system



T. B. J. Andrew, N. C. L. David

November 2003

Proceedings of the 2003 ACM SIGMM workshop on Biometrics methods and applications WBMA '03

Publisher: ACM Press

Full text available: [pdf\(320.02 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Today, minutiae-based and image-based are the two major approaches for the purpose of fingerprint authentication. Image based approach offers much higher computation efficiency with minimum pre-processing and proves also effective even when the image quality is too low to allow a reliable minutia extraction. However, this approach is vulnerable to shape distortions as well as variation in position, scale and orientation angle. In this paper, a novel method of image based fingerprint matching bas ...

Keywords: Fourier-Mellin Transform, Wavelet Transform, fingerprint verification, invariant features

25 Embedded systems: applications, solutions and techniques (EMBS): Efficient implementation of fingerprint verification for mobile embedded systems using fixed-point arithmetic



T. Y. Tang, Y. S. Moon, K. C. Chan

March 2004

Proceedings of the 2004 ACM symposium on Applied computing SAC '04

Publisher: ACM Press

Full text available: [pdf\(398.40 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#)

Fingerprint sensors are getting small enough to be included in mobile devices to enable fingerprint verification be employed as an authentication tool when using the mobile devices for secure transactions. Fingerprint verification, however, is a computing intensive technology that requires a lot of floating-point computation. Unfortunately, the embedded processors in most mobile devices do not support floating-point hardware. In this paper, we present the implementation of a fingerprint verifica ...

Keywords: embedded systems, fingerprint, fixed-point arithmetic

26 Architectures for cryptography and security applications: Efficient fingerprint-based user authentication for embedded systems



Pallav Gupta, Srivaths Ravi, Anand Raghunathan, Niraj K. Jha

June 2005

Proceedings of the 42nd annual conference on Design automation DAC '05

Publisher: ACM Press

Full text available: [pdf\(1.07 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

User authentication, which refers to the process of verifying the identity of a user, is becoming an important security requirement in various embedded systems. While conventional solutions for user authentication have relied on password-based mechanisms, they are increasingly being replaced by biometric technologies such as fingerprint, face, and voice recognition, which are known to provide higher levels of security for user authentication. This paper investigates the problem of supporting eff ...

Keywords: embedded systems, extensible processors, fingerprint, user authentication

27 The Design and Test of a Smartcard Chip Using a CHAIN Self-Timed Network-on-Chip

W. J. Bainbridge, L. A. Plana, S. B. Furber

February 2004

Proceedings of the conference on Design, automation and test in Europe - Volume 3 DATE '04

Publisher: IEEE Computer Society

Full text available: [pdf\(253.22 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [index terms](#)

The CHAIN self-timed Network-on-Chip (NoC) architecture provides a flexible, clock-independent solution to the problems of system-on-chip (SoC) interconnect. In this paper we look at the use of CHAIN in a low-performance, smartcard chip to connect two self-timed processors and a range of memories and peripherals. Key design-time advantages

provided by the use of CHAIN in this design included the ability to operate a very-narrow, high-frequency network fabric using serial communication without the ...

28 Applications I: Parameter optimization for biometric fingerprint recognition using genetic algorithms



Tobias Scheidat, Andreas Engel, Claus Vielhauer

September 2006 **Proceeding of the 8th workshop on Multimedia and security MM&Sec '06**

Publisher: ACM Press

Full text available: pdf(227.85 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In this paper, we suggest an optimization approach for fingerprint authentication using genetic algorithms. Our application was planned so that it can be used without great effort for different biometric systems. Instead of estimating the required parameters as in the case of some methods, here they are determined with the help of genetic algorithms. Our own test database consists of 1200 fingerprints of 12 persons. For the confirmation of the results, which were found out with this test set, th ...

Keywords: biometrics, fingerprint, genetic algorithms, optimization

29 A practical revocation scheme for broadcast encryption using smartcards



Noam Kogan, Yuval Shavitt, Avishai Wool

August 2006 **ACM Transactions on Information and System Security (TISSEC)**, Volume 9 Issue 3

Publisher: ACM Press

Full text available: pdf(454.98 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

We present an anti-pirate revocation scheme for broadcast encryption systems (e.g., pay TV), in which the data is encrypted to ensure payment by users. In the systems we consider, decryption of keys is done on smartcards and key management is done in-band. Our starting point is a scheme of Naor and Pinkas. Their basic scheme uses secret sharing to remove up to t parties, is information-theoretic secure against coalitions of size t , and is capable of creating a new group key. However ...

Keywords: Broadcast encryption, smart cards

30 A user interface using fingerprint recognition: holding commands and data objects on fingers



Atsushi Sugiura, Yoshiyuki Koseki

November 1998 **Proceedings of the 11th annual ACM symposium on User interface software and technology UIST '98**

Publisher: ACM Press

Full text available: pdf(226.02 KB)

Additional Information: [full citation](#), [references](#), [citations](#), [index terms](#)

Keywords: fingerprint recognition, input devices, multimodal user interfaces, multi-computer user interfaces

31 Applications I: Secure fingerprint-based authentication for Lotus Notes®



Nalini K. Ratha, Jonathan H. Connell, Ruud M. Bolle

October 2001 **Proceedings of the 2001 workshop on Multimedia and security: new challenges MM&Sec '01**

Publisher: ACM Press

Full text available: pdf(731.41 KB)

Additional Information: [full citation](#), [abstract](#), [references](#)

Fingerprints have been used to recognize people for several decades. The advent of low cost inkless fingerprint scanners coupled with extra compute power available in client workstations, biometrics in general and fingerprints in particular are being considered for many secure authentication applications. Lotus Notes is a groupware supporting email access and other activities such as calendar management included in it. In this paper, we describe the architecture of a system that integrates bo ...

32 Fingerprinting: bounding soft-error detection latency and bandwidth

Jared C. Smolens, Brian T. Gold, Jangwoo Kim, Babak Falsafi, James C. Hoe, Andreas G.



Nowatzky
October 2004

ACM SIGPLAN Notices , ACM SIGARCH Computer Architecture News , ACM SIGOPS Operating Systems Review , Proceedings of the 11th international conference on Architectural support for programming languages and operating systems ASPLOS-XI, Volume 39 , 32 , 38 Issue 11 , 5 , 5

Publisher: ACM Press

Full text available: pdf(229.65 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

Recent studies have suggested that the soft-error rate in microprocessor logic will become a reliability concern by 2010. This paper proposes an efficient error detection technique, called *fingerprinting*, that detects differences in execution across a dual modular redundant (DMR) processor pair. Fingerprinting summarizes a processor's execution history in a hash-based signature; differences between two mirrored processors are exposed by comparing their fingerprints. Fingerprinting tightly ...

Keywords: backwards error recovery (BER), dual modular redundancy (DMR), error detection, soft errors

33 Poster session: Design of a fingerprint system using a hardware/software environment



Lee Vanderlei Bonato, Rolf Fredi Molz, João Carlos Furtado, Marcos Flores Ferrão, Fernando G. Moraes

February 2003

Proceedings of the 2003 ACM/SIGDA eleventh international symposium on Field programmable gate arrays FPGA '03

Publisher: ACM Press

Full text available: pdf(187.05 KB)

Additional Information: [full citation](#), [abstract](#)

Processing system of fingerprint are CPU time intensive, being normally implemented in software. This paper present a new algorithm for fingerprint features localization, that can be easily implemented in hardware (system-on-a-chip, FPGA). This algorithm is composed by 3 stages, first stage read a fingerprint image (255x255pixels, ash tones) and apply a Gaussian Filter, after this, apply a absolute difference mask (ADM) for detector the edges in the image filtered and the last stage look for fin ...

34 A smartcard for authentication in WLANs



Marc Loutrel, Pascal Urien, Guy Pujolle

October 2003

Proceedings of the 2003 IFIP/ACM Latin America conference on Towards a Latin American agenda for network research LANC '03

Publisher: ACM Press

Full text available: pdf(333.05 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Wireless LANs based on the IEEE 802.11b standard have spread very quickly over the past few years. Nevertheless a lot of security issues remain and stop its deployment in corporations. One of the most important issues is the authentication of a terminal to an Access Point. We propose an interface to integrate the Extensible Authentication Protocol into smartcards and will show that smartcards could constitute the de-facto device for authentication in Wireless LAN as they are for GSM and will ...

Keywords: authentication, smartcard, wireless LANs

35 High Security Smartcards

M. Renaudin, F. Bouesse, Ph. Proust, J. P. Tual, L. Sourgen, F. Germain

February 2004

Proceedings of the conference on Design, automation and test in Europe - Volume 1 DATE '04

Publisher: IEEE Computer Society



Full text available: pdf(86.43 KB)

Additional Information: [full citation](#), [abstract](#), [citations](#), [index terms](#)

New consumer appliances such as PDA, Set Top Box, GSM/UMTS terminals enable an easy access to the internet and strongly contribute to the development of e-commerce and m-commerce services. Tens of billion payments are made using cards today, and this is expected to grow in a near future. Smartcard platforms will enable operators and service providers to design and deploy new e- and m-commerce services. This development can only be achieved if a high level of security is guaranteed for the transac ...

36 Database theory, technology, and applications (DTTA): Fingerprinting relational databases



Fei Guo, Jianmin Wang, Deyi Li

April 2006 **Proceedings of the 2006 ACM symposium on Applied computing SAC '06**
 **Publisher:** ACM Press
 Full text available:  pdf(185.18 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In this paper, we propose a fingerprinting solution to protect valuable numeric relational data from illegal duplications and redistributions. We introduce a twice-embedding scheme. In the first embedding process, we embed a unique fingerprint to identify each recipient to whom the relational data is distributed. The embedding process is controlled by a secret key. Meanwhile, the fingerprint can be detected using the same secret key to prove ownership at a numerical confidence level. The second ...

Keywords: database, fingerprint, robustness, watermark


37 Poster: A two-stage fingerprint classification system

 Raffaele Cappelli, Dario Maio, Davide Maltoni, Loris Nanni
 November 2003 **Proceedings of the 2003 ACM SIGMM workshop on Biometrics methods and applications WBMA '03**
Publisher: ACM Press
 Full text available:  pdf(607.18 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In this paper we describe a fingerprint classification system based on a two-stage sequential architecture: an MKL-based classifier is first used to select the two-most-likely classes and then a second classifier (specifically trained to discriminate between the two classes) is then adopted for the final decision. The experimentation performed on NIST Special Database 4, which is one of the most important benchmarks in this area, shows that the new approach yields an error rate lower than previo ...

Keywords: classifier combination, directional image, feature selection, fingerprint classification, subspace classifiers

38 Fingerprint classification based on extraction and analysis of singularities and pseudoridges

Qinzhi Zhang, Kai Huang, Hong Yan
 May 2001 **Proceedings of the Pan-Sydney area workshop on Visual information processing - Volume 11 VIP '01**
Publisher: Australian Computer Society, Inc.
 Full text available:  pdf(466.11 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In this paper, we introduce a new approach to fingerprint classification based on both singularities and traced pseudoridge analysis. Since noise exists in most of the fingerprint images including those in the NIST databases which are used by many researchers, it is difficult to get the correct number and position of the singularities such as core or delta points which are widely used in current structural classification methods. The problem is we may miss the true singular points and/or get fa ...

Keywords: biometrics, fingerprint classification, pseudoridge and singularity analysis

39 Work-in-progress: Does habituation affect fingerprint quality?

 Mary Theofanos, Ross Micheals, Jean Scholtz, Emile Morse, Peter May
 April 2006 **CHI '06 extended abstracts on Human factors in computing systems CHI '06**
Publisher: ACM Press
 Full text available:  pdf(379.46 KB) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Interest in the environmental factors that affect biometric image quality is increasing as biometric technologies are currently being implemented in various business applications. This study aims to determine, through repeated trials, the effects of various external factors on the image quality and usability of prints collected by an electronic reader. These factors include age and gender but also the absence or presence of immediate feedback. A key factor in biometric systems that will be used ...

Keywords: biometrics, feedback, fingerprint image quality, habituation

40 Microarchitecture-level power analysis and optimization techniques: Cooperative



multithreading on 3mbedded multiprocessor architectures enables energy-scalable design



Patrick Schaumont, Bo-Cheng Charles Lai, Wei Qin, Ingrid Verbauwhede

June 2005 **Proceedings of the 42nd annual conference on Design automation DAC '05**

Publisher: ACM Press

Full text available: pdf(952.12 KB)

Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#)

We propose an embedded multiprocessor architecture and its associated thread-based programming model. Using a cycle-true simulation model of this architecture, we are able to estimate energy savings for a threaded C program. The savings are obtained by voltage- and frequency-scaling of the individual processors. We port a fingerprint minutiae detection application onto this architecture, and show the resulting performance on single-, dual-, and quad-processor configurations. The energy-scaled qu ...

Results 21 - 40 of 200

Result page: [previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [next](#)

The ACM Portal is published by the Association for Computing Machinery. Copyright © 2007 ACM, Inc.

[Terms of Usage](#) [Privacy Policy](#) [Code of Ethics](#) [Contact Us](#)

Useful downloads: [Adobe Acrobat](#) [QuickTime](#) [Windows Media Player](#) [Real Player](#)